

# (12) United States Patent

# Murphy et al.

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## (54) APPARATUS AND METHOD FOR AUTOMATED PRIVACY PROTECTION IN DISTRIBUTED IMAGES

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### Related U.S. Application Data

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- (51) **Int. Cl.** G06F 21/62 (2013.01)G06F 21/10 (2013.01)G06K 9/00 (2006.01)
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- (58) Field of Classification Search CPC .. G06F 21/6245; G06F 21/10; G06K 9/00268 See application file for complete search history.

#### (56)**References Cited**

# U.S. PATENT DOCUMENTS

12/1999 Paul 5,999,932 A 6,154,764 A 11/2000 Nitta et al.

6,167,435	A	12/2000	Druckenmiller et al.
6,204,840	B1	3/2001	Petelycky et al.
6,216,141	B1	4/2001	Straub et al.
6,310,694	B1	10/2001	Okimoto et al.
6,484,196	B1	11/2002	Maurille
6,665,531	B1	12/2003	Oderbacka et al.
6,724,403	В1	4/2004	Santoro et al.
6,757,713	В1	6/2004	Ogilvie et al.
6,898,626	B2	5/2005	Ohashi
7,124,164	В1	10/2006	Chemtob
7,149,893	В1	12/2006	Leonard et al.
7,203,380	B2	4/2007	Chiu et al.
7,356,564	B2	4/2008	Hartselle et al.
7,519,670	B2	4/2009	Hagale et al.
8,001,204	B2	8/2011	Burtner et al.
	(Continued)		

### OTHER PUBLICATIONS

Esther Shein (Ephemeral Data, Communications of the ACM, vol. 56, No. 9, pp. 20-22, Sep. 2013).\*

Snapchat (How Snaps Are Stored and Deleted, May 9, 2013, 3 pages).\*

(Continued)

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#### (57)ABSTRACT

A method executed by a computer includes receiving an image from a client device. A facial recognition technique is executed against an individual face within the image to obtain a recognized face. Privacy rules are applied to the image, where the privacy rules are associated with privacy settings for a user associated with the recognized face. A privacy protected version of the image is distributed, where the privacy protected version of the image has an altered image feature.

### 14 Claims, 10 Drawing Sheets

